VDH VIRGINIA DEPARTMENT OF HEALTH
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# Vibriosis (Non-Cholera)

## What is vibriosis?

Vibriosis is a potentially serious illness caused by a group of bacteria called *Vibrio*. Infection with *Vibrio* bacteria can cause two types of illness: vibriosis and cholera. Although many species of *Vibrio* exist, most vibriosis (non-cholera) cases are caused by *Vibrio vulnificus* or *Vibrio parahaemolyticus.* The bacteria are naturally found in salt and brackish (i.e., somewhat salty) waters, including coastal waters of the United States and Canada. The bacteria thrive in warm waters and thus cause more infections during the summer months.

## Who gets vibriosis?

Any person can get vibriosis, but it is more common among individuals with weakened immune systems. Persons with conditions that damage the liver (e.g., hepatitis, liver disease, excessive alcohol use, drug use) are more likely to experience severe illness.

## How is vibriosis spread?

People can get infected through eating raw or undercooked seafood, especially shellfish (including oysters, mussels, and clams). Infection can also occur when the *Vibrio* bacteria enter the body through a break in the skin while a person is in salt or brackish water or while handling raw fish or shellfish caught from these waters. Certain *Vibrio* species can also cause ear infections when salt or brackish water enters a person's ear. Vibriosis cannot be passed from person to person.

## What are the symptoms of vibriosis?

*Vibrio* bacteria can cause three types of infection: gastrointestinal, wound, and blood. Gastrointestinal illness happens when someone gets infected by eating raw or undercooked seafood, and the symptoms include watery diarrhea, abdominal cramps, nausea, vomiting, and/or fever. Wound infections happen when *Vibrio* bacteria enter openings in the skin and cause skin breakdown and sores that become painful, red, and/or swollen. Among persons with weakened immune systems, the bacteria can enter the blood and cause severe life-threatening illness with fever and chills, decreased blood pressure, and/or blistering skin lesions. Studies have shown that people with kidney disease, iron disorders, or diabetes are 80 times more likely to develop *V. vulnificus* blood infections than healthy people.

**How soon after exposure do symptoms appear?**

The time between exposure and onset of symptoms varies with infection type (e.g., gastrointestinal, wound, blood) and *Vibrio* species. Symptoms of gastrointestinal infection with most *Vibrio* species can appear anywhere from 4 to 96 hours after eating raw or undercooked seafood, but usually appear within 12 to 24 hours after exposure. The Food and Drug Administration *Bad Bug Book* states symptoms of wound infection with *V. vulnificus* may appear as few as four hours after exposure, and symptoms of blood infection usually appear within four days of exposure.

**How is vibriosis diagnosed?**

Vibriosis is diagnosed by laboratory testing of stool, wound, or blood samples.

**What is the treatment for vibriosis?**

People with diarrhea should drink plenty of fluids to avoid becoming dehydrated. Treatment is not necessary for most cases of vibriosis, and people usually recover with no long-term health problems. However, if *V. vulnificus* infection is suspected, treatment should be started right away because antibiotics improve survival. Antibiotics are generally not recommended for infections with species other than *V. vulnificus,* but may improve survival in severe or prolonged illnesses. Vibriosis wound infections may require rapid medical attention; some wound infections are serious and may require surgery.

**How can vibriosis be prevented?**

*Vibrio* bacteria do not alter the appearance, taste, or odor of seafood. Persons with weakened immune systems and/or a liver disorder should be especially careful not to consume raw or undercooked seafood due to a high risk of severe or fatal infection. Most gastrointestinal infections can be prevented by thoroughly cooking shellfish, especially oysters. When ordering shellfish at a restaurant, ask that the shellfish be fully cooked unless it has been treated with a post-harvesting method to reduce the presence of *Vibrio*. For shellfish in the shell, either a) boil until the shells open and continue boiling for 5 more minutes, or b) steam until the shells open and then continue cooking for 9 more minutes. Do not eat shellfish that does not open during cooking. Boil shucked oysters at least 3 minutes, or fry them in oil at least 10 minutes at 375°F. When cooking, make sure that raw foods do not touch cooked foods or surfaces used for cooking and eating. Wear protective clothing (e.g., gloves) when handling raw seafood.

To prevent wound infections, it is important to avoid exposing open wounds or cuts to salt or brackish water, especially for those who have a weakened immune system. If a cut or wound is exposed to salt or brackish water, wash the affected area right away with soap and clean water. Antibiotic ointment or hydrogen peroxide can also be used as directed to clean wounds. If the wound shows signs of an infection, such as swelling or redness, visit a healthcare provider right away.

**Can you test for *Vibrio* bacteria in waterways?**

Yes, but it is not usually necessary. The bacteria are present naturally in salt and brackish water, especially in warmer months.

**How can I get more information on vibriosis?**

1) If you have concerns about vibriosis, contact your healthcare provider.
2) Call your local health department. A directory of local health departments is located at http://www.vdh.virginia.gov/LHD/index.htm.
3) Visit the Centers for Disease Control and Prevention's vibriosis website at http://www.cdc.gov/vibrio/index.html.
4) Read the Food and Drug Administration *Bad Bug Book, Foodborne Pathogenic Microorganisms and Natural Toxins (Second Edition)* at http://www.fda.gov/Food/FoodborneIllnessContaminants/CausesOfIllnessBadBugBook/.
5) Read the VDH Fact Sheets on cholera, *Vibrio vulnificus,* and *Vibrio parahaemolyticus* at http://www.vdh.virginia.gov/Epidemiology/factsheets/.